

REMARKS

Claims 1-10 are currently pending in this application. Claims 1-7 were elected for further prosecution following a restriction requirement. Claims 8, 9 and 10 were subsequently withdrawn from consideration by the Examiner in the Office Action mailed on July 13, 2010 ("the Office Action"). Claims 1, 6 and 8 have been amended to correct minor informalities.

No new matter has been added.

In view of the following remarks, it is respectfully submitted that the claims be allowed and the application be passed to issue.

Patentability under 35 U.S.C. § 103(a)

Claims 1-7 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shimamura et al. WO 03/079469 (referencing English language equivalent US 2005/0287439) in view of Nakamoto (JP 200-173612). Applicants respectfully disagree for the following reasons.

Independent claims 1 and 6 each recite, in pertinent part,

A negative electrode material for lithium secondary batteries . . . comprising . . . a carbon material adhered to a part of a surface of the basic material particle, and a film having a silicon oxide, the film being formed on a surface portion of the basic material particle, the surface portion being other than a surface portion to which the carbon material is adhered.

This configuration, as recited in claims 1 and 6, is depicted, for example, in FIGS. 1B-1D, which show carbon material 2 adhered to a part of a surface of the basis material particle 1, and a silicon oxide film 3 formed on a surface portion of the basic material particle 1, the surface portion being other than a surface portion to which the carbon material 2 is adhered.

On pages 3-4 of the Office Action, the Examiner concedes that Shimamura does not disclose a carbon material adhered to a part of a surface of the basic material and a film having

silicon oxide formed on a surface portion of the base material particle and not on the carbon, per claims 1 and 6. Therefore, the Examiner relies on Nakamoto for disclosing that “fibrous carbon is fixed over a part of the surface of a negative electrode comprising a Si composite,” (see the Office Action, page 3, citing paragraph [0016] of Nakamoto).

Furthermore, the Examiner contends that formation of a silicon oxide layer on the remaining surface of the basic material composite layer would be inherent.

It is submitted that the Examiner’s assertion of inherency is improper in this 35 U.S.C. § 103(a) rejection, as the Examiner has not provided evidence that a silicon oxide layer would necessarily form via “a natural slow-oxidation treatment” as asserted on page 4 of the Office Action. Moreover, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

As such, because the obviousness rejection is without basis, the rejection is improper and the claims are allowable.

Furthermore, as shown, for example in Table 1, the present configuration as recited in claims 1 and 6 would not have been obvious to a person having ordinary skill in the art, as it achieves unexpectedly improved battery capacity was achieved (batteries LE1 to LE5, capacity retention ratio of 82-95%) as compared to the configuration that the Examiner asserts is taught

by the combination or references, (i.e. slow oxidation treatment, battery LC2 having a capacity retention ratio of only 75%).

Accordingly, because none of the cited references teach or suggest all of the elements of claims 1 and 6 and because a person having ordinary skill in the art would not have found it obvious to combine and modify the disclosures of the cited references to achieve the subject matter recited in claims 1 and 6, claims 1 and 6 are allowable. Furthermore, claims 2-5 and 7 depend from and further define the subject matter of claims 1 and 6 and therefore are also allowable.

Moreover, claim 4 is also allowable based on its own merits. Claim 4 recites, in pertinent part, “wherein the amount of the film is at least 0.1 wt% and at most 1.0 wt% per silicon element in terms of oxygen amount.” The configuration as recited in claim 4 would not be obvious in view of the cited references, as there is clearly no teaching or suggestion of controlling the amount of silicon oxide film in any of the references and there is no basis for the assertion that configuration recited in claim 4 would be inherent. As such, the Examiner’s assertion of obviousness is respectfully, without merit.


In view of the above amendments and remarks, Applicants respectfully submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned.

Application No.: 10/584,776

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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